

10337

June R. P. Ross

Field Notes Book 1

DOCUMENT NO. 838
Invertebrate Paleontology
Yale Peabody Museum

1 of 2

Central States Ordovician-Silurian

May 12, 1995, to May 25, 1995.

Need ^{doc 838}
strat
summary
columns (to scale)
with Rock
units and
sample #'s
on it.



June 21, 1995

Trine R. P. Ross.

Stouffer failed to
recognize that these were
2 Receptaculites horizons
— one in upper Stewartsville
& also in Cummingsville

Don
iv.
78225
2060

Twin Cities Brickyard
is shallower & closer to
source of silts which
have dropped out due to
shallowing

Comments by
R. Sloan

On U.S. 52 Wagner Hill Section
5/24/95 1 1/2 miles S. of Cannon Falls. From



5/12/95

② Log in roadcut 0.1 mile S. of intersection
of Goodhue roads 9 & 14 on Rd. 14
Photo B & W exposed part of section. E side of
south end of roadcut on County Blvd 14
Photo C. S. 3 outcrops
Photo C. S. 4 middle part

Photo C. S. 5 showing disturbed bedding at
top of Hidden Falls Mbr.

Road cuts on both sides of road.
East side shows better overall
features but 2 ironstained horizons
are more clearly seen in W. side cut.
E side has some large blocks that
have fallen down. See notations
on graphic sect. Fig. 20-4 Sloane, (ed.) 1987
(we had lunch at this site).

Glenwood Fm is a deepwater clastic unit with pyrite + lime nodules
with a "corrosion" zone at base.

Platteville is a complex of two to probably 5 sub packages
separated by pyritic "corrosion" zones. I take the
corrosion zones here to be deep water saline surfaces of
mineral deposition but not sediment deposition -
beneath at least two corrosion zones there are beds of



On U.S. 52 Wagner Hill Section
5/21/95. $1\frac{1}{2}$ miles S. of Cannon Falls. From
S. end of town at junction with

①

West side of U.S. 52, ⁵ found lenses
photograph. Hammer head on Unit
no. ~~10~~ 15. Break in slope is prob. shale
at top of Unit 7. CS#1. Bt W#1. Sherwood Mbr.

Up higher in section CS#2. Bt W#2.
Top of Sherwood Mbr & overlying Wall Mbr
of Preaser Fm.

Mile Post 93 close to top of section
Bt W#3 just a few paces N. of MP 93

Cyclicity is about 1' to $2\frac{1}{2}'$ through most of section
argill. limestone with very silty-shaly breaks - no
sequence boundaries as such, but there is a change
in amount of argillaceous material entering the
depositional system, parallel upwards.

St. Paul Minn II 1:250,000 pencilled location

Devonian & Mississ. Wagner Hill section
in Dr. Sloan, ed, 1987. Minn. Geol. Survey
Rept. of Invest. 35, Fig. 9-3



5/13/95

Burrowed-filled sediment. I suggest the thickness of the beds ~~depth~~ = depth of burrows. Some graded bedding in Carmonia member; some pyritized fossil fragments including blocks (Rapidianella found on one slab)

Platteville & lower Dacorah sh are "deep" water deposits of turbidites (calcareous) and omission surfaces (pyritic), burrowed muds, etc.

(Note: Town of Sogn is just W. of intersection of County roads 9 & 14 on County Rd. 14.)

Up hill (E.) of intersection of county roads 9 & 14 on County Road 9, there is an old X in higher units of Pease Fm. It may start at top of Cummingsville. Burrowed lime mud.

This "Plateau" is apparently on Pease Fm.



5/12/95 County Road 7, Olmsted Co.

3A 5/12/95 Cummingsville Type Section

" entrance to private property (Xmas
tree on left) ^{base on left} blue gray shale forms massive
floor. O X face as depicted in Fig. 20.7
(Sloan, et. 1987). K. borrowed shale - all
chewed up

Br. W. no. off 1/4 ^{East face} ^{base} ^{of each} ^{face} ^{base} ^{on each} ^{face}
B + W 50% pink. Roadcut - east side of
valley. Top of Cummingsville ~~Br.~~ Fm;
Friggaly Mbr - same foot weathering
The Martine Mbr of Cummingsville as shown on graphic section in
Sloan et al 1987 has more of a "sandstone" outcrop than indicated.
No "m" cycles throughout type Cummingsville - Becker Mbr has 4 (or 5?)
"cycles" that have almost no silty breaks, rest has siltstone.

To get to Cummingsville, go S on Hwy 52
from Rochester, MN, ^{toward Chaffield} and turn on
County Rd 7, and travel ^{ca} 3/4 miles to
roadcut

See Sloan (1987, p.



5/12/95.

* Continue S of Co Rd 4 to intersection w. Co Rd 30,
turn right & go up hill to section
Cummingville Tunnel. Go on to road 30

(38)

At W# 4 photo. Glenwood, Recatonicia &
Plattville. lower part of rd cut

By W# 8 photo. Middle part of rd cut.

General view of top. Glenwood Fm at
bottom

Decker bentonite w. close to top of road cut
Unconformity (See Boundary) at (or near) top of Glenwood,
then Recatonicia a trinog. system truncl. deep water
Plattville. No Carbonates (debris) coming from SE?
and shale (Decoral) from northwest ???

Recatonicia is difficult to identify
- thin shale & at thin late band
overlying shale

* 6/28/98 revised
location - 1998 data. Came north
from Iowa on IL 52 & took MN 30
west for about 4 miles; road cut
west of intersection of ~~5 miles~~ across
bridge



late afternoon/evening. I followed the roads
we came to Masonic Park, Fillmore Co, MN 5/12/95

(4) 8 or 9 cycles of 5-6' (stone at
creek level is 6 ft.)

1"-1 1/2" silty/silty brks are yellow weathering -

weathered upper cycles break down into 1' foot ledges -

ls. is banded in lighter & darker dark light gray "clings"
The location is ~~and~~ and a little higher at
3-4 miles N of Spring Valley

Photo B & W, & possibly a 2nd photo
at Masonic Park,

Wrote south of Masonic Park about 4 miles and
explored the roads in and out of the creek
valleys which exposed some of the Stewart ls.
ls. and some of the upper Cannonville.



5/13/45

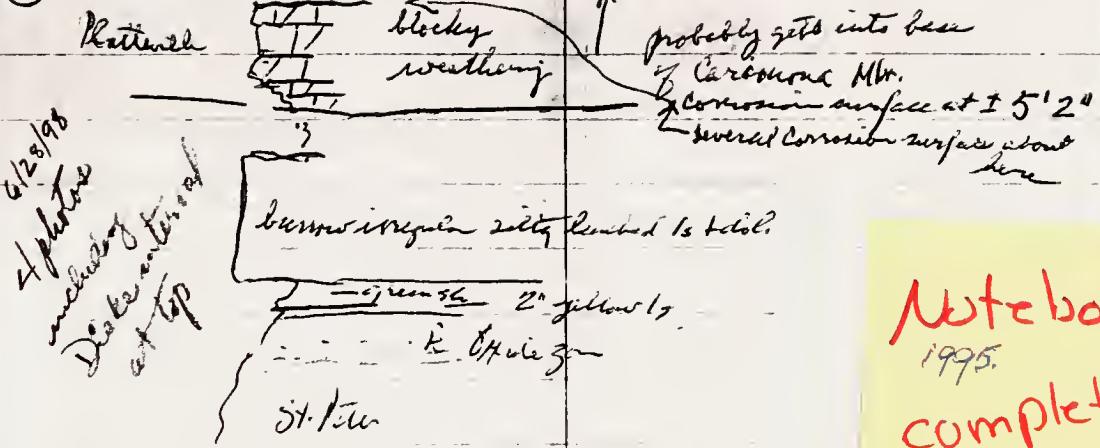
Kenyon is west on Minn. 60
near Red Lake



5/14/95.

4½ miles E of Chaffield on State Hwy 30, ^{MN} then roadway cut on State Hwy 74 - see section below) about ½ mile W of Troy ¼ mile W of junction of Hwy's 30 & 74 (Maybe ^{4½} miles from [?] [See sign outcrop section for ref.] Chaffield) Top of lower Glenwood Shale is irregularly worn ^{grey} green layer "Mifflin" nodular ls. Mifflin is thoroughly burrowed has pseudomolds in a few beds. nodular limestone

(8)



Notebook 1
1995.
completed

We then returned to Hwy 30 & east to Brushfield. At Brushfield village we stopped at Conoco Station

Took Hwy 43 south to Mabel, then Hwy 14 east to Spring Grove. About 3 miles W of Spring Grove, there are 2 working



5/14/75

quarries, on each side of Hwy 44. See Fig 20, topographic map (9A) (Cracks)

Spring Grove X, south side of Hwy

Coll. Bay. 5/14/95/A; float in Decorah Sh.

2. 2 B & W photos in X on S side of Hwy 44

2 B & W photos #19 & 20. in X on N side of Hwy 44

(9B) X S. side of Hwy 44 (Hailings)

Scree slope shows numerous brachiopods - a shell hash in calcarenite. Fine calcilutite below calcarenite. 3"-4" diam orthocerid mollusc; trilobites

(9C)

X N. side Hwy 44

late ledges (v. thin) 2"-3" - not v. persistent from lower $\frac{1}{3}$ to bottom of upper $\frac{2}{3}$ of Decorah Shale.

v. dark grey to brownish black band 1 ft plus thick of shale with shell hash here & there at top of it.

Roxite & shell hash of brachiopods. This suggests a sudden deepening event creating anoxic shale environment.



5/14/95 Kendallville, Iowa

East side of river

⑩ X N. of Kendallville on Upper Iowa R.
loc. 17. Hevossen, Gehr & Broadhead, 1979.
B&W photo. Just before bridge over
river.

large gray oyster shell at top of Sinsinawa Mbr
& buried (extensively)

Pavlovec X, north bank of Upper Iowa R. at
Kendallville, Iowa. ~~SW 1/4 SE 1/4 sec. 33, T 100 N,~~
R 10 W. Sinsinawa 6'10"; Stewartville 35'10";
Dubuque Fm 19'! Rosa Hillman

See Hevossen, Gehr & Broadhead

⑪ Loc 33. X 3 miles SE of Kendallville, Iowa. Cattle Rd.
2 B&W photos. X at small stream on N
side of rd. SW 1/4 SE 1/4 Sec. 1, T. 99 N, R 10 W. limestone
fairly substantial late 2-3 ft made
up of 2-3 "beds" - broken up into
pieces - is coming in & appearing
section of Maquoketa Fm at top of X
Stewartville Fm 16'11"; Dubuque Fm 34'5" &
Maquoketa Fm 17'3"

Saw violets in bloom



5/14/95

Take US 52 N of Decorah, Twin Springs Rd.
Bluff faces on road on both sides
2 miles N of junction w. Hwy 9. All
Stewartville Fm. Impressive "gateway"
to the city of Decorah with

We took St. Hwy 139 south from Kendallville
looked at X on Cattle Creek Road, then
rejoined Hwy 139 which led to Hwy 9
which took us to Decorah, Iowa
MacDonald's (& Walmart) not far
(S) from intersection of US 52 & St. Hwy 9.



5/14/95

Leverson, Gerb & Broadhead, loc. 9.

Road cuts Iowa Hwy 9, 7 miles SE of
Decorah, Iowa, SW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 10 & NW $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 9
3 B&W photos } SW $\frac{1}{4}$ Sec. 10 & NW $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 9
3 C.S. photos } T97N, R 7W.
} because rain came out

13 loc. 9. 1 B&W photo; 1 C.S. photo.

Packages of rocks become thinner &
less blocky; also more shale coming
in at upper 20 ft. See Leverson & Gerb
(1972, Iowa Acad. Sci. Fig. 2) - we agree
with graphic sect. for Dubuque here & at loc. 10.

We 1st visited this locality¹⁰ then loc. 9.
Leverson, Gerb & Broadhead loc. 10.

→ gate was locked, but CR walking
down road to ¹² loc. 10, flowing $\frac{1}{2}$ mile S
 $\frac{1}{4}$ mile E of Decorah. →
Single lane bridge crosses stream
X on S side of ~~steep~~ road & east side
of creek. 12" shaly bed is well seen at both 9+10 and
is 10 to 12' below Dubuque-Maquoketa contact. (See L, G, & B, 1979)

Both locs 9+10 are comparable
in what they show. We don't think
Dubuque fm is as thick as 34 ft. but
only ca 20 ft. - but exposures are
limited (also see L, G, & B, 1979 use a "marker" bed which is usually
lower than change into the ls/lsh pattern typical of the Dubuque.)



loc. 10 (cont'd) NW 1/4 SE 1/4 sec. 9, T. 97 N,
R. 8 W. Stewartville for 17' 10" Dubuque 34' 7" 1/3

Macrobeta contacts



5/14/95

Pottsville

Passed Pottsville X, $2\frac{1}{2}$ miles N. of Pottsville (saw from distance) X east side of road; late afternoon sun showed "golden" X face

1979

See Levensen, Gerb & Broadhead, loc. 53, X $4\frac{1}{2}$ miles NE of Pottsville, Iowa. NW $\frac{1}{2}$ SE $\frac{1}{4}$, Sec. 19, T 96 N, R. 5 W. Stewartville 18' 5"; Dubuque Fm 32' 3"; fm

(14)

Lea's quarry

Church Street, Leiana. X $\frac{1}{2}$ mile N. of town on west side of road. Lea's X NW $\frac{1}{4}$ SE $\frac{1}{4}$, sec. 5,

2 B&W photos

T 95 N, R. 5 W. Stewartville

2? CS photos

Fm. 17' 2"; Dubuque, 33' 4"; Magnobeta $\frac{1}{2}$ 1/3'

A set of beds, identified by thin shaly bands at top and base ($\pm 9-10'$) is very burrowed, and the burrows filled with more silty carbonate. Swallows have been able to excavate these old burrows for their nests.

Levensen, Gerb & Broadhead, no. 45.

Red gums in bloom. 1 tree opp. Motel 6 on side Devon (street, like a set opp. hedge st. (\approx 11.5' do))
Upper cliff ss. are all b/w
Upper cliffs - Swallows in late joints



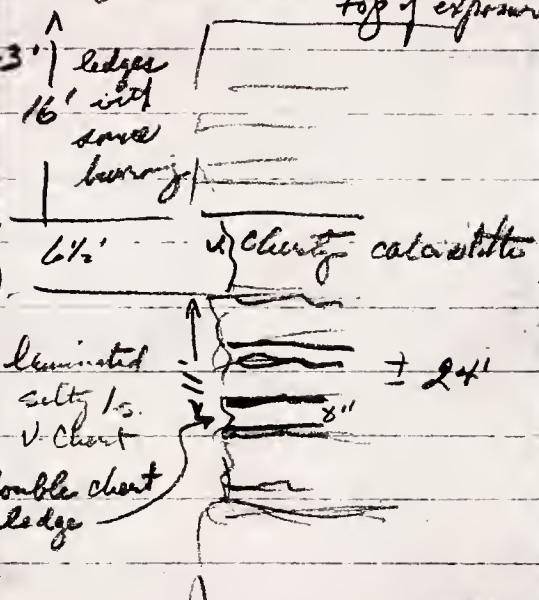
5/15/95. Dubuque, Iowa

left Motel 6 at 1:15am after reviewing field notes & locality data. Decided to stay another night (through Tuesday night) We'll take in Illinois locality by radiating from Dubuque. Took US 20 west to Dyersville, then Co. Rd 136 through New Vienna to Luxembourg; turned W on State Rd 34 headed toward Colesburg then on toward Folgerwood



5/15/95

Section just west of Twin Bridges Park -
Twin Bridges Park ^{top of exposure}
Ca 6 miles ^{East West} 1-3' ¹ ledge
Colesburg, Iowa on
State Highway 3 (3-3 miles
E. of junction with St. Hwy 38).
Tried to find this on L+G '72
and think it is their
Danforth, top of Sherwood double chert
Member. (Chert sequence 3)
Member



Almost 6 miles east of
Folgerwood, S.A.S. ^{± 20'}
1. Photo B+W { Riffle Hill Mbr. ^{some CS and}
(2) ^{of Stewartville Fm} ^{wagyu within}
crosswork pattern ^{3 1/2-2" laminae}
& thalassinoides ^{base of}
belemnites ^{3' red cut +}

15 Clayton intersection w. ^{crosscut} ^{road cut & section}
County Rd X 2 1/2 Littleport Rd, starts at
bridge over river & extends 2 miles up
hill, ^{crosscut} exposures on both sides of road;
loc. 57, Johnson, Gosh & Broadhead (1979)
Littleport Roadcut. SE 1/4, Sec. 25 & NW 1/4
Sec. 36, T 92 N, R 5 W. Dubuque Fm. 33' ^{7 1/2"}
with Maquoketa Fm contact above & Stewartville



5/15/95

contact below. The lowest shale parting of Templeton & Wilman (1963) is 7' 3" below the base of the marker bed. (L, G & B. 1979, p. 64).

4 photos B & W coming down hill starting in Maquoketa Fm.

(at Volga, the Elgin Mb. of Maquoketa Fm in creek bottom

Violets; mauve flowers

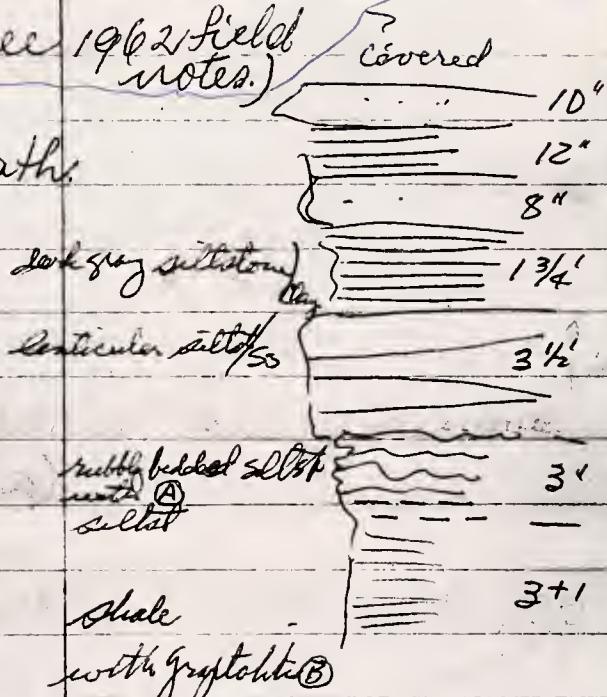


5/15/95.

$\frac{1}{4}$ mile

⑯ Section on road immediately S of Graf on
W side of road. Adj railroad bed has been
Plots - 2 B/W $\frac{1}{100}$ aff. 4 Iowa,
been

Dubuque Co. (see 1962 field
notes) covered
converted to a
gravelled bike path.



Float,
Col. 5/15/95A

A. Orthocerids
solitary corals
encrusting bryozo.
brachiopods

✓ Dolorthoceras sociale Cladopeltis?

From Graf to intersection then east
to intersection to Gabby. On the way to
Ruth Twin Springs Ck - road section on W
side was noted.

GR thinks this is top Mbr of Deshaw Fm

1 See Lewison & Gerk (1972 p. 113? chart, Fig. 1)
2 but ???

3 This is lower part of Maquoketa
Fm just above Repankete zone
4 R.S.



5/15/95 (18) Becker Quarry - Asbury, Iowa 5/15/95
 Maquoketa (poorly exposed)

Little Post

total 34' 9" Dubuque

porosity zone here

Luana

2" sh

Frankville

13' 3"

Frankville

a lower band "pock-marked" marker bed of L + G 7 1/2
 - v. distinctive interval (minicaves)
 & then a few inches up another one v. distinctive band of Stewartville
 (L, G, & B, 1979) p. 62, 264 (loc. 58)

loc. 58, Levoxson, Gaska & Broadhead (1979)
 (64) "Dubuque reference locality, north
 side of Kauffman Avenue, just before
 intersection with N. Grandview
 We were not able to walk to face of
 quarry

lilac just beginning to bloom.

... more sand, & more quartz from south



5/16/95

(19)

Dubuque. Corners of Horas Blvd & Cox St.

Loc. 51. Dubuque type locality - abandoned
x north side of Horas Blvd at Cox St.
intersection. SW 1/4 sec 24, T89N, R3E.

Upper 21' of Dubuque Fm. with
Maquoketa contact x has been partly
filled for a parking lot acc. to
Henson, Gerb & Broadhead, 1979

Loc. 51. 1 B&W photo.

We couldn't see Maquoketa Fm.
Beds rippled above clay. Beds 8-10"
acc. to depth of burrowing

These are shales up to a couple inches
- the shales are thick & thin

Environment of deposition ??? -

a lot of silt in past due to extensive
burrowing "pockmarks" extensive in
lower half of bldg. Alumni Campus

Center is a new bldg so Maquoketa
Fm prob. removed in bldg this structure

Note W520 (Dodge St. is being
widened & there is considerable construction)

(20) 1/2 mile W of Devon St & Dodge St (W520)
intersection. Road cut N side of Dodge St
Shows upper part of Dubuque Fm with a



(20) is across from Motel 6 at
Durango

(21)



(20) contd (old road cut)
possible massive bed ^{close} to
5/16/95 base of section. (L, G & B, 1979, loc. 51)

(21) X on east side of IL 52, ca 1 mile from
junction of IL 52 & Hwy U.S. 61. To the east
X, Dubuque Fm & underlying ^{top of} Stewartville
Fm. 1 B&W photo

100 yards south on IL 52 to Olde Massey
Road; turned into southern entrance
of X (v. gullied road in X) where we
were at top of Dubuque Fm & weathered
Maquoketa Fm slope. 1 B&W photo.

long grade of road IL 52 into St. Bonifacius
from north. Extensive weathered
road cut.

Various roadcuts on IL 52 into
Bellevue. Gas at Conoco, N end of Bellevue
hump at Wagner's End of Bellevue
Bellevue State Park at top of hill. High
massive bluff at top of hill of Silurian dolomite.

(22) Maquoketa Fm bottom is covered &
we could see v. v. little of it. Overlying
unit is Silurian Hopkinton Fm
& lower part is a v. shaly, silty
dolomitic siltstone (see Closs 1961?



5/16/95.

Co. Rd. 2134 to Preston, then Iowa Hwy 64 ^{west} to Maquoketa
Then ~~on Hwy~~ 61 north to Dubuque

5/16/95/17. Sparry calcite from Dubuque Fm

(23) (21) Opposite our motel, Dubuque, Iowa
Maquoketa Drive & U.S. 61. Bldg ~~construction~~
site (Called locally ~~Steel Post~~ ^{Key West})
Heavy equipment businesses
Extensive weathered shallow
slope with 1 float of iron replaced by
Ironstone in upper/middle part
dark brownish grey at
bottom (6'-8' thick) overlain by
3-4 ft of lighter grey shale.
There was evidence of fossiliferous
material (not recognizable fossils)



5/16/95.

5 ca. 2 $\frac{1}{2}$ " diameter

(20) cont'd. Large chunks of sparry
calcite from about 3 ft near
top; prob. below Magnobeta Fm
contact Coll. 5/16/95/F.

US Hwy 61 east from Dubuque into
Wisconsin. Excellent roadcut
from Mississippi R up hill
to east.

Redwing blackbirds

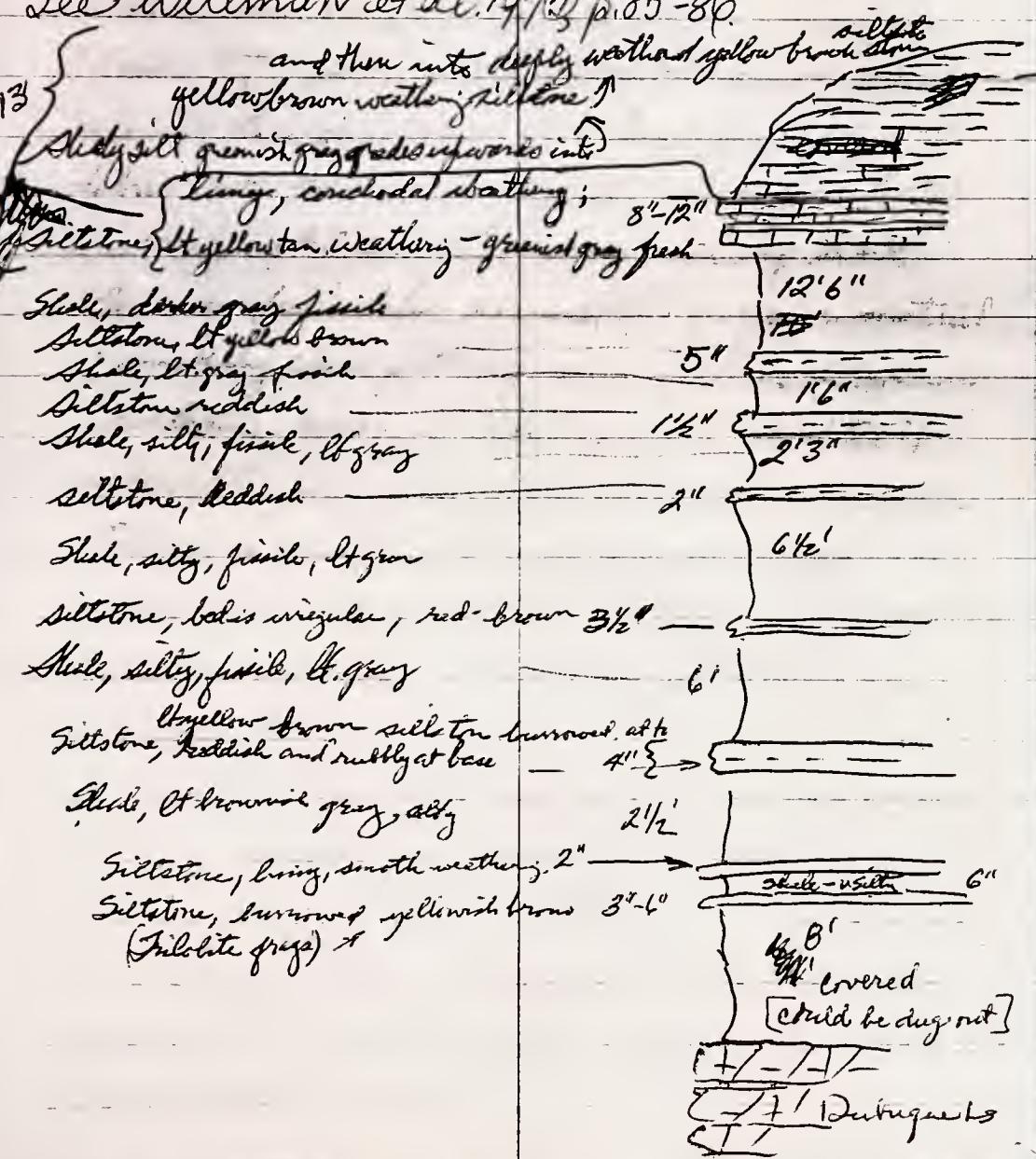


5/17/95

of railroad crossing

In railroad cut at Scales Mound, 1/2 mile E of
West Debuque via US 20 to Galena
(coffee stop) then Stagecoach Trail to
Scales Mound. Photo 184N. (24A)

See Willman et al. 1975 p. 85-86.





5/17/95 24B

Upper part of Scales Formation about 5 miles

Scales Mountain on railroad cut. photo 1-3/W

on RR tracks & 184W photo from top (edge of road) looking

slopes on RR cut

Silty shale, lt grayish gray in 2 to 3" beds and
regularly interbedded with

Siltstone, very silty in 2 to 4" beds. - There are
at least ~~2 to~~ cycles of these two lithologies regularly
repeated through about 14" of exposure above
debris that covers base of cut, ^{i.e.} about 8129'

not seen at base of cut above railway level

Some surfaces have fragments ($\frac{1}{4}$ ") of organic material
(something like ~~flattened~~ "grass"). More common in
siltstone facies. Fibrous frags. (? Dissolites?)

limy Slightly limy (limy) bed about 4" down from
top of exposure with gray appearance on one
surface (? top surface) $\frac{1}{2}$ " ripple crests about 2" wide
nodules in some pieces. Bands of pyrite nodules in
some beds -

Question (?) could the upper part of this railroad cut
be as high as NW Illinois facies of H. Atchinson ? 3

facies Atchinson

Could the 22 cycles (or thereabouts)
correlate with the cyclicity in the
Cincinnati area



5/17/95. Dubuque US20 to Galena
to Scales Mound on Stage ~~Chariot~~ Coach
Trail. Then after looking at Scales
Mound area, we took road to
Apple R. Canyon St. Park - road closed
to Apple R. Canyon. Went south to
Mt. Carroll, Brookville, Polo, Dixon
to Mendota

US 51 to Bloomington & I 74 to
Mendota. Arrived in rain



5/18/95.

Urbana Illinois - visited university
Took Interstate 74 to Indianapolis ^{then I-70} Brookwood/
Dayton, Ohio. The Motel 6 is ca 9 miles
N of Dayton. It rained heavily from
just east of Urbana

Stopped at next area tourist
information centers at W. entrance
to Indiana & also Ohio.

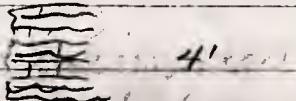


5/19/95 West of Camden, Ohio

Dayton, Ohio. Visited Wright State Univ. library & xeroxed 4 articles on U. Ohio, stratigraphy.

25 West of Camden on Route 725 on old abandoned Rte 725, 1/4 mile W. of bridge on West side of creek. Excellent exposures in east bank of creek. Pebble Co., Ohio. Shale w/ some ls.

Nodular shales, with thin shaly interbeds.



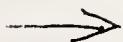
Spiriferids, long other bivalve columnals, corals, stony, concretions.

Abandoned

Road cut is now overgrown. Upper part of shale w. some late ledges is a nice cut for a house on N side of road.

* 5/19/95 A through G.

Creek name of creek given.



See 1963 field notes for location of 1995 box collections (6-11-63 AAFAB etc.) Ripple marks on late ledges throughout

Side creek comes in on N side of old road - ~~main river~~ thin bedded late ledges

D 3 B&W photos at upper late cut

H B&W photos at bottom of creek where extensive river bank section



5/19/95

CR saw 2½ foot diameter colony of
ramose hep; branch diam ca 1½ cm;
no monticules. This was a huge
float block in river bed at
bottom of creek, just upstream from
bridge ("new" bridge). Old bridge
has been removed

We took some float samples
to see if they approximated to
collection sites in 1963 so we
would have an orientation
on where we were in old road
cut section. Coll. 5/19/95A - F. Coll. 5/19/95G
was float in roadway gravel.

~~late~~ is a bluish-green-grey;
v. nodular bedding; v. diverse
fauna & extensive biofouling
At bottom of creek, ~~late~~ more
thickly bedded incl. calcarenite
bed of at least 1½ feet

~~late~~ Interstate 70 - 14 miles E of Ohio line - massive
good road section



5/20/95

Left Englewood/Rayton & headed west on Interstate 70. Took US 27 south through Richmond, Indiana, on 227 because of fire on US 27. Good road cut w. good ~~late~~ exposure - several sections along this road

Rejoined US 27 before 227 splits off to east. Good exposure of shale & thin ~~late~~ beds just S of Richmond on US 27. Considered to Liberty, Ad cut on Indiana 44 W. of town is grass covered; no exposures.

Gasoline at Liberty

This day we tried to trace Fox's (1962) sections & locations.



Union Co. Fox (1962)

5/20/95 2 miles E west of Liberty Ind. on north side

(26) of Indiana 44, east of creek just west of turn off to "Treaty limestone". Very poorly exposed road cut.

~~5/20/95~~ float from near arrow.
small brach. (float) \rightarrow shale + siltstone
with beds of fossiliferous packstone

5/20/95/D

float (5/20/95 C
coral bed.

5/20/95/B ?"Tetradium"

with *Calcarina* + *Spirifer tridentis*
'stick' trilobites (float)

5/20/95/A

ledge of 2" / 5
calcareous
(mudstone with
2-4" interbeds of
green ~~calcareous~~
 $\pm 12'$ soon

ledges of 2"
fossil calcarenous
with greenish gray
calcareous (algalitic)
interbeds
15 to 19 feet soon

Site is also:

1 mile E of Ind. 44 to Deer Lapeville
& Deakertown State Park

upper part of Brookville ^{Fm} & lower part of Liberty ^{Fm}



5/20/95 Ate lunch at stream edge.

We continued on Indiana 44 to Connersville, then took (121) to meet US 52 crossed US 52 to take small unnumbered road to Breena Vista. "Rolling" roads but no exposures in covered road sections; contd to ~~St.~~^{to} Hamburg & then east on gravel road for ± 2 miles to "bluff" along N. side of valley.

Road cut on N. side of road w. ledges of coarse fossil hash (mainly brachs) - calcarenite (6"-8" ledges); sparsely calcite silty calcisiltite makes up some ledges. Road cut is too weathered to put a section together.

(27) Collection 5/20/95 F - float; middle part of Hickory Fm. Hamburg



5/20/95 Locality of Hay, Pope & Frey (1981)
(28) Bonwell Hill, Indiana

1st road stop 1 mile NE Brookville & 1/4 mile east of road into dam spillway, 1 photo B+W liberty of top of Ubynesull cut on west side of road at top of exposure. Indiana 101 road cut.

large ~~accrals~~ ca. 3" across, along radial sublim

Periophthalmus

Strange "scalloped algal outline" = hash of ~~bedrock~~ - forms distinctive layer perpendicular to bedding plane (up on end) & weathering pattern

2 photos B+W $\frac{2}{3}$ of the way down cut

Hay, Pope & Frey unit 3A is ~~greyed~~ beds with iron oxide stems, phosphite (?) and now brown yellow weathering tops ~~spongicale~~ ~~concrete~~;

5/20/95 G. From "Excello" of Brookville Fm. - from bottom; float
5/20/95 H. Float from prob. 3a of Hay Pope & Frey.

5/20/95 J. Float; Bed by weathering

5/20/95 K. Float from lower part ~~of~~ ^{of} limestone shale of Unit 3a or top of 1a



5/20/95.

K. flower part Bonwell Hill contd
K. base of liberty at top of
Waynesville

T. most likely came from top of
Waynesville

edge, f26.8



5/20/95.

turnoff

29 Gass Hill. 1/2 mile N of road to Gass Hill
National. On next hill N across shallow
valley from Gass Hill (Note N side of Gass
Hill exposes similar.

3 B&W photos. 1st one lower part
2nd one middle part & 3rd one upper
part of east side of road cut

Indiana 101 road cut

loose bry. Coll 5/20/95/L. Slab had
free bry. weathering out from upper
beds of Brookville Fm. (Hay, Poppe & Frey
1981, p. 84, Fig. 9)

5 B&W photos B&W

5/20/95/h. Big bed ^{15ft} 12 ft above
base of Whiteewater Fm

5/20/95/M - some trps (large stems)

5/20/95/N - "Homotypha" bed
2 collections

going
uphill 5/20/95/O - free specimens

collection - top of section? am not certain of
collection level.



5/20/95.

Note: Road section on US 27, about
1 mile S. of city of Richmond city limits
[thick ~~limestone~~] of thin ~~limestone~~ + limy shales
20 ft.



5/21/95

Stop 1. (2:30pm) RR cut at north edge of

(30) Wright Bros. Memorial Hill, Fairborn, Ohio.

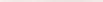
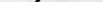
2 B/W photos to S; 1 B/W photo of N. side. Trees ~~10~~ 5

Ledges of lt brown weathering lime-silicate/sandstone 2-2½" (includes a med. calcareous grainstone) platy bedding 1' ^{quartzite} ~~congl.~~ lt tan gray, some burrowing

Shale, med. to light gray, w. silt. ± 25' / greenish gray
shallow

+ Calcareous
25. ferruginous, very w/ organic, molds filled with silt. 51% ~~20. greenish gray~~ blue med gray

ledge at top is nearly planar. 4-5' {
 ls. ledges below are v. shaly & silty and
 poorly exposed. In fact this could be a
 XH XB XMT "Homotypera"
 3" to 4" ledge of

covered predominantly shaly intercal. \rightarrow 
with thin shaly ls. interbeds $\pm 22'$  includes
green-grey siltst.

June says these are full of bryozoans

5/21/95 - A = Homotrypa ~~bandat top~~ = XM (about 6"-8" ["] ~~thick~~
Homotrypa?

5/21/95 - B- = XB (Bythopora?) 2 collections

5/21/95/C- = XMT (Mixed Tapeworms)
2 collections



5/21/95. General area of Fairborn, Ohio
of Ohio 235

(31) X N side of road $\frac{1}{4}$ mile from
intersection of Interstate 675 & Ohio 235
Broad quarry shows:

Dolostone, uneven bedding, massive to
thin bedded, bihermal in places,
light gray - yellowish, whitish, color varies
on weathering

Shale, dark gray top; some 2' relief
reddish weathering; grainish dolostone
from this interval.

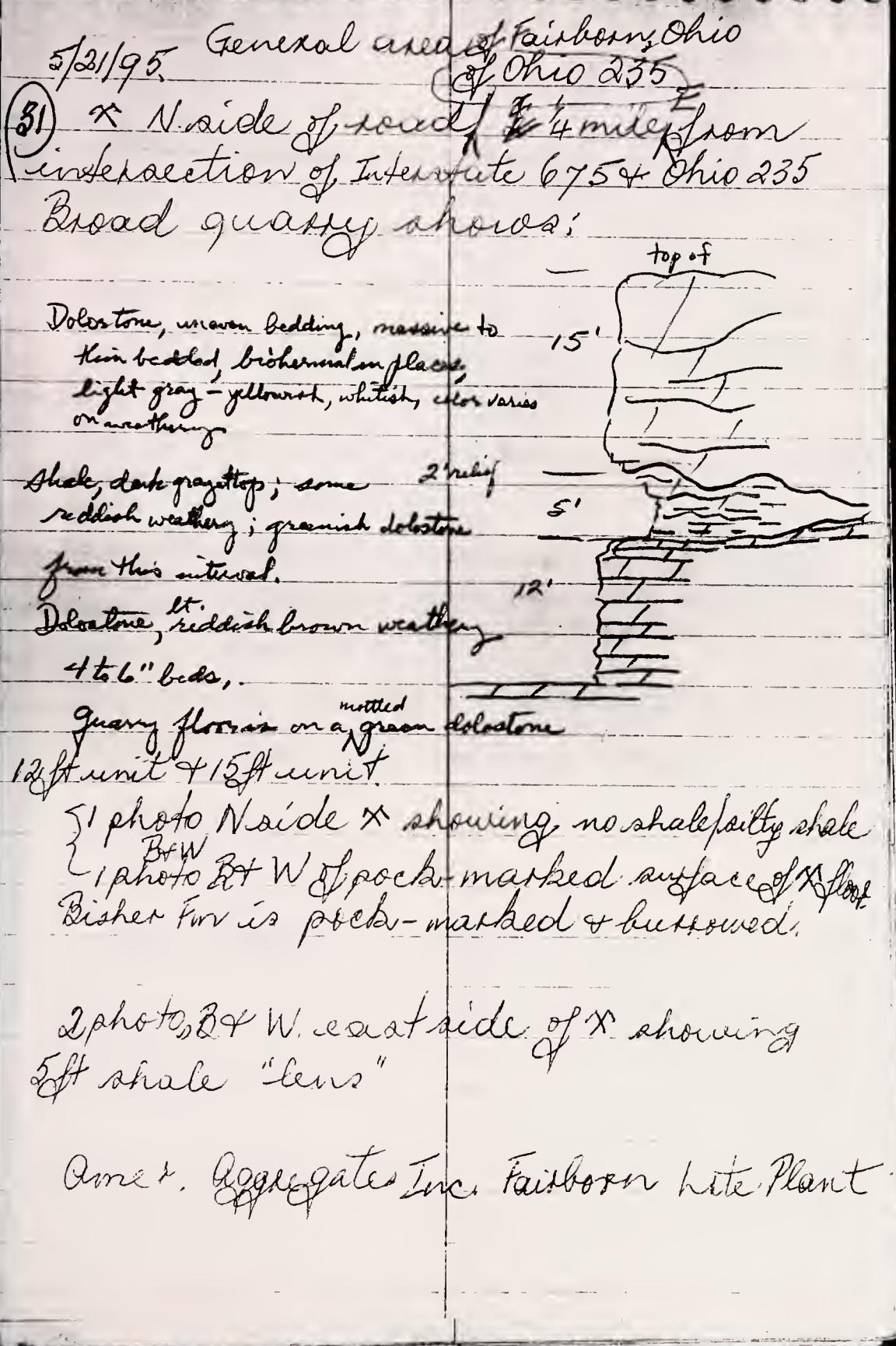
Dolostone, lt. reddish brown weathering
4 to 6" beds.

Quarry floor is ^{notted} on a green dolostone
12 ft unit & 15 ft unit.

{ 1 photo N side X showing no shale/silty shale
{ 1 photo B & W of pock-marked surface of X floor
Bisher for is pock-marked & burrowed.

2 photos, B & W, east side of X showing
5 ft shale "lens"

Amet. Aggregates Inc. Fairborn lime Plant





5/22/95

Finished packing samples.
About 11:30 am took samples to CCP at
1308 Brandt Pike, E. Area of Dayton.
Went P.O. about 1 1/2 miles further ~~on~~ along
of Ohio 201. Sent postcard to Rick & Barb Coen

Hamburgers at Riverside near Interstate
675. Then took I-675 to meet US ~~35~~ 35
US 35 to Xenia then back through
Xenia & picked up Ohio 380 south &
after several attempts stopped at
Caesar Creek State Park information
centre. Here we obtained maps

3 B&W photos at Spillway



5/22/95 (32) Holland (1993) locality
Caesar Lake Spillway (4' fall)

Spillway section of Holland 1993, saw about 27' of limestone and siltstone with numerous bryozoans, brachiopods and burrows. Some ls. beds have wavy bedded lower surfaces, some ls. have wavy bedded upper surfaces, some have both ls. = limestone ls. base conchoidal fracture truncated by ls. can only be traced for ab. Herpetella sp. ls. are truncated by ripples solitary corals ls. of bryozoans in general, smaller ones near base of section, of several species; larger "Homotrypa" are extensive mud top. "Rickets", Herpetella sp., large solitary corals common. Those have a cyclicity of 3' to 5' of ls. and ls. and thinner siltstones.

"Several" collections. There are 6 or 7 (check photos) of these cycles which are more silty in the lower 1 or 2 and then become less silty upwards.

3 collections

5/22/95/A - float from wall of spillway (walked across flat)

5/22/95/B - N side of roadway float

5/22/95/C - on top of road in place.

Same units as at Wight Bros. Mem. Hill RR - in real-weathered zone. Rickets is below this cut



5/22/95 (32) Holland (1993) locality
Caesar Lake Spillway (4 tail)

Spillway section of Holland 1993, saw about 27' + of limestone and siltstone with numerous bryozoans, brachiopods and burrows. Some beds have wavy bedded lower surfaces, some have wavy bedded upper surfaces, some have both. One or two beds have conchooidal fracture, 2" to 5" + thick, these can only be traced for about 30 to 40 yards before they are truncated by rippled surfaces. Two kinds of bryozoans in general, smaller ones near base of section, $\frac{1}{2}$ " to several species; larger "Homotrypa" are extensive near top. "Dictyon", *Hebertella* sp., large solitary corals common. Those have a cyclicity of 3' to 5' of silty ls^{and alluvium} and ls^{and alluvium} + thinner siltstones.

"Several" collections. There are 6 or 7 (check photos) of these cycles which are more silty in the lower 1 or 2 and then become less silty upwards.

3 collections

5/22/95/A - float from E wall of spillway (walked across flat)

5/22/95/B - N side of roadway float

5/22/95/C - on top of road in place.

Same units as at Elight Bros. Mem. Hill RR
- no red-weathered zone. Dictyon below this cut

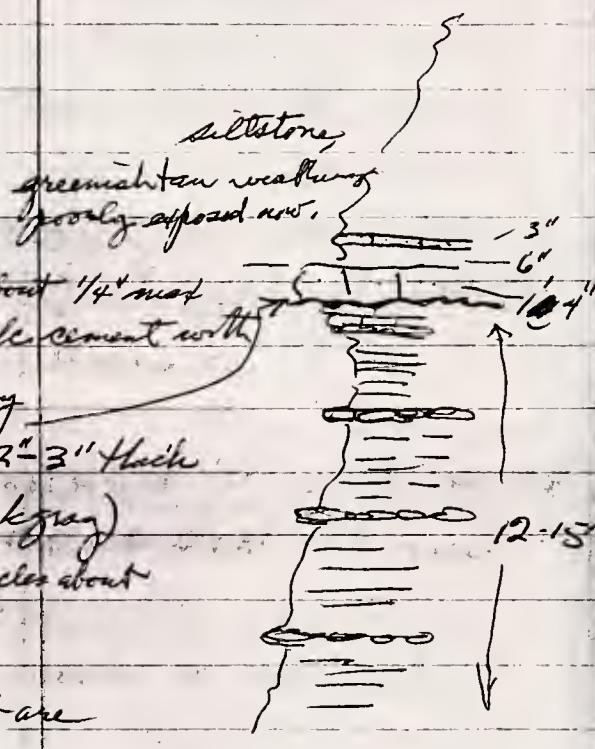


5/22/95. (33) Caesar Lake Dam at Spillway
Lower section at Dam outlet. (A. Field)

Calcareous shell frags about $\frac{1}{4}$ " max
dimension. Spongy cement with
some reddish weathering

Cycles of nodular ls. 2"-3" thick
and limy shale (dark gray)
and very thin ls. Cycles about
3 to 5' thick

Bryozoans present, but are
small and fragmentary in these
thin limestones



2 B&W photos.

Collections

5/22/95 A float
CP visited this - "wet shoes"



5/22/95

Left Caesar's (in State Park) at/near Harveyburg, went to Cowan then west to Waynesville (very much ~~titivated~~ tourist town); cone & hamburger here. Then took In exiting at Waynesville, we saw out 1963 road section, which for the most part is overgrown, then to "coffee" break stop above.

Drove to Lebanon & then Clarksville, explored several roads & did not find suitable sections

Took Hwy 350 east to Hwy 730 & then turned north on Hwy 730 about 1 mile to Cowan Lake Spillway & Dam, 1 B&W photo at Spillway

Can't read
titivated



5/22/95

34) Cowan Lake Spillway

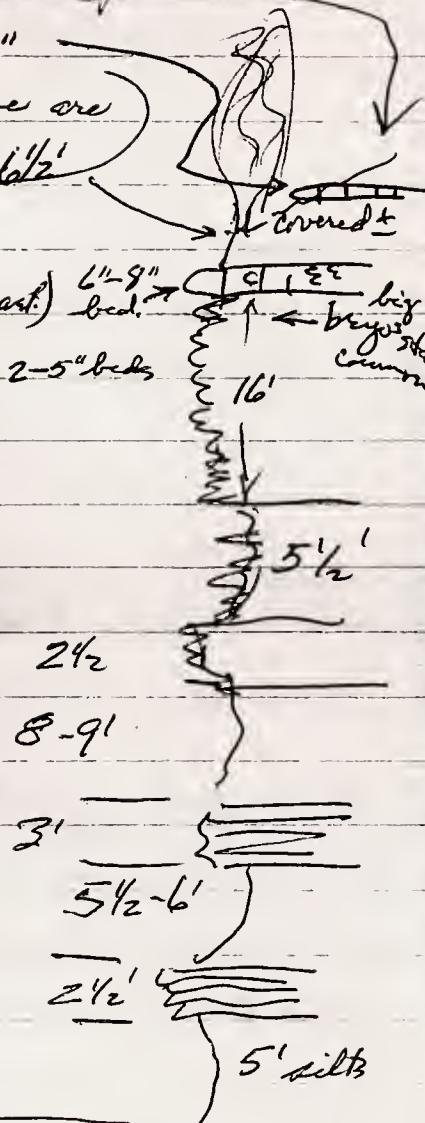
Glacial till above

Coarse calcareous gravels - 10" to 12"

Brownish yellowish tan silts above are
weathered and not exposed as beds. 11 1/2'

Calcareous, sandy calc. cement

Orange red upper surface is sandy (crust) 6"-9" bed. 1 1/2" big
flat trickles down into boulders 2-5" beds 16' common
boulders



Calcareous packstone, fossil 3" to 5" beds
with thin interbeds of siltstone.

~~bryozoans + brachiopods~~

Feluyoid (Pectin) brachiopods (Ref) 4" siltstone

only rare bryozoans

(fishermen state maintenance personnel
picked up wood signs)



5/22/95

From Cowan Lake Spillway we took Hwy 730 to Blanchester, then Ohio 28 to Mulberry (driving through town) then I-275 to exit for Ohio 125 where motel is located

All the mowed "lawns" & street right-of-ways.



5/23/95

Motel reservation Cincinnati East

3960 Nine Mile Road \$33.34. Motel SE ext. 1075

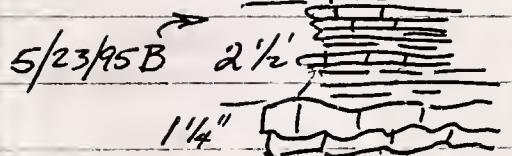
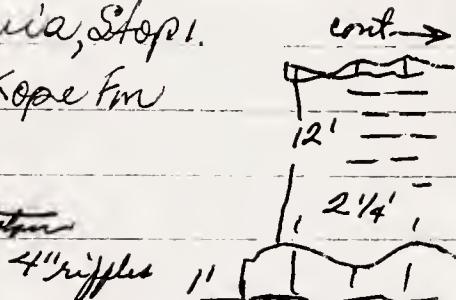
Travelled on I-275 to Ohio 32 and stopped at 2nd Batavia exit at Bales Road. ^{5/23/95}

(Hoy, Pope & Frey, 1981 - Batavia, Stop 1.

Lower stop (Stop 1 of H, P, + F) Kope Fm

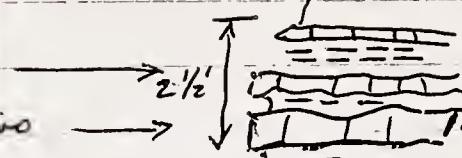
(in road to highway)

siltstone w/ a few thin calcarenous siltstone

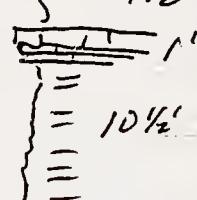


Calcareous, calcarenous siltstone, burrowed

Calcareous, grainstone/packstone massive

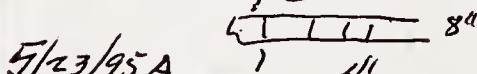


Calcareous, ferruginous weathering - top is almost flat. Base is silty & gradational



Siltstone, very shaly sandy

Packstone, bryozo + brachiopods

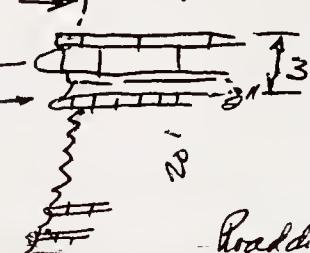


Brachiopod, grainstone/packstone. Brown stained ^{FeO3} greenish slate.

Crinoid bed - surface is columnar jointed

some fine wimmed calcareous

Siltstone, gray tan weathering, very burrowed



Road ditch

5/23/95 A → South side of road at Nair Rd cut →



5/23/95. Hay, Pope & Frey (1981)

More brachiopods

Continued from
previous page.

Covered



Calcareous

Siltstone w a few thin calcareous - these
thicker & thin on outcrop

Calcareous ferruginous ls

- these
continued



5/23/95 (Haj, Pope & Frey, 1981 Stop 2A)

15, 1"-3" wavy beds and interbedded

dark gray siltstone, large brachiopod

common, 5/23/95/C float

from uppermost 30

Massive calc. siltstone bed. 1 1/2" +

prominent large scale wavy bed surface

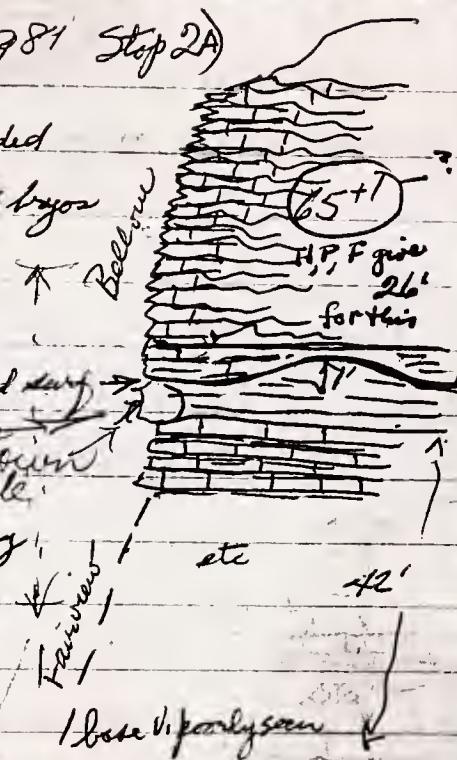
Shale/siltstone 2-2 1/2' - *Micromitium*

ls. ledges, 2 1/2"-4" thick, very

soft, burrowed, ferruginous

bedding is relatively "even",

generally poorly exposed.



100 ft section

Photo B & W shown by blue ink band
photo taken, however, ~~of~~ ^{300 ft} face to get sunlight
5/23/95/C - monticulose ^{stems of} flat broad colonies
that are 2-3" broad & 3" thick

Road cut section along Ohio Rte 32
on southern side

monticulose stems and



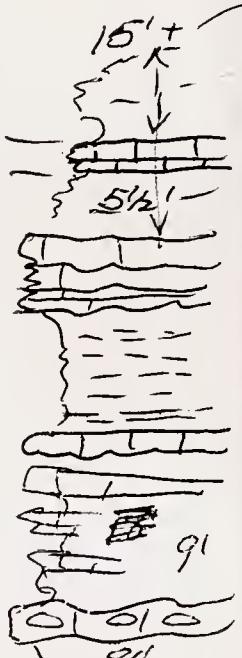
5/23/95 "Excell" Mbr. of "Brookville" Fm. on Ohio 132 at
 ① Tifager Rd about 3/4 mile NE of 132 junction w/ 122.
 (Haw, Rose & Frey, 1981. Step 2B
 BW of east side of road cut.

Some beds with brachs & few bryozoans but
 the rocks are too silty for brachs & bryos.
 "Excell" mbr of "Brookville" Fm.

Poorly exposed ledges of ls + siltstone

1 1/2'

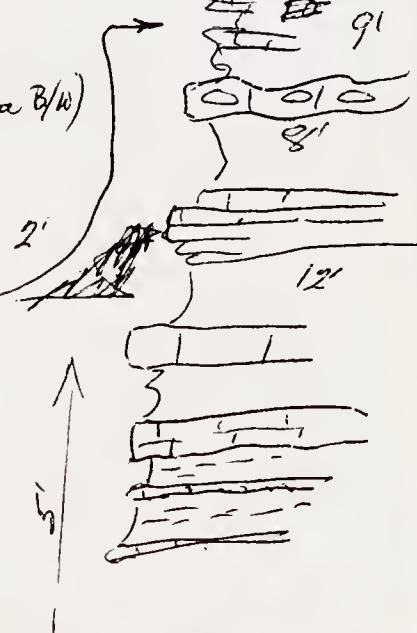
Silt zone, green, calc., burrowed, shells on
 some surfaces as "dig" surfaces or as
 "colonization" surfaces; some well laminated,



Calc. with 2"-3" siltstone pebbles (picture B/W)

opposite 5/23/95 D
 Tifager Rd. (flat)

Cal. siltstone, grayish gray, burrowed
 and 2"-3" irregular ledges to
 calcs. fossils. grainstone/packa
 brach + trilob., + some bryos.





5/24/95 Took Ohio 4425 from Williamsburg

Ohio 125 road N of White Oak Creek; excellent long road cut sections. Holland (1993) lists this section 8 miles west of intersection I-68 & Ohio state 125 (12:15pm lunch \$1.47 at Georgetown)

(Posted 4 aerogrammes at Amelia P.O. to
Herbert Holdsworth, Rev Holdsworth,
Joan Bushworth & Rev. C. Tyndall re
Mary's death) (See 1903 file 529/35. Knowsley
now) SW

38 Took US 68 N from Georgetown; ended up on Hammer Rd which intersected ~~Dear Delhi~~ Delhi-Anheim Road which we took to Anaheim. Midman to Edwards Rd (SE) of Anaheim about 3 miles S of Anaheim weathered ~~late~~ on N side - several discontinuous exposures; also ~~the~~ lower part of section in small ch on E. side of ch (photo B & W of late ledges in creek) (large "strophomenids" almost 2" - 2 1/2" across) weathered ~~late~~ siltstone; some ~~thin~~ ~~late~~ ledges (2' - 3" thick) On crevices around hill after crossing

On curve around hill after crossing



• 4 miles of section
small cb & sp. chs on east side
we have lowered "sparry calcite"
(red weathering soil) up at next
cut we w. silty lime mudstone
w. many brachs & few bryoz
[2.5 miles S of bridge at Anheim
on Brownstown - Anheim Rd.)
Hammer Rd then Trilobite Rd into Sardina

Brownstown



5 Stop 53, ^{1/4} mile ^{1/4} west of junction of 41 and 32 on highway 32. near Peebles, Ohio. ^{Kleppel 1984} ~~about 1/4 mile west of junction of 41 and 32 on~~

2 B/W photos

Pebbles dol - light + v. light gray, some bands

"Transition"—burrowed, silt-filled burrows in a dolé-x bedded, gray dolomite "concretionary" limestone.

Lilley - upper part very shaly & silty, dark gray $\frac{1}{4}$ " bedding, laminated appearance.

Muddy, ledge-forming siltstone.

Muddy, ledge forming dolomite near middle of study interval

Solomitic trans-

Dolostone, \times bedding, massive,

sity partings

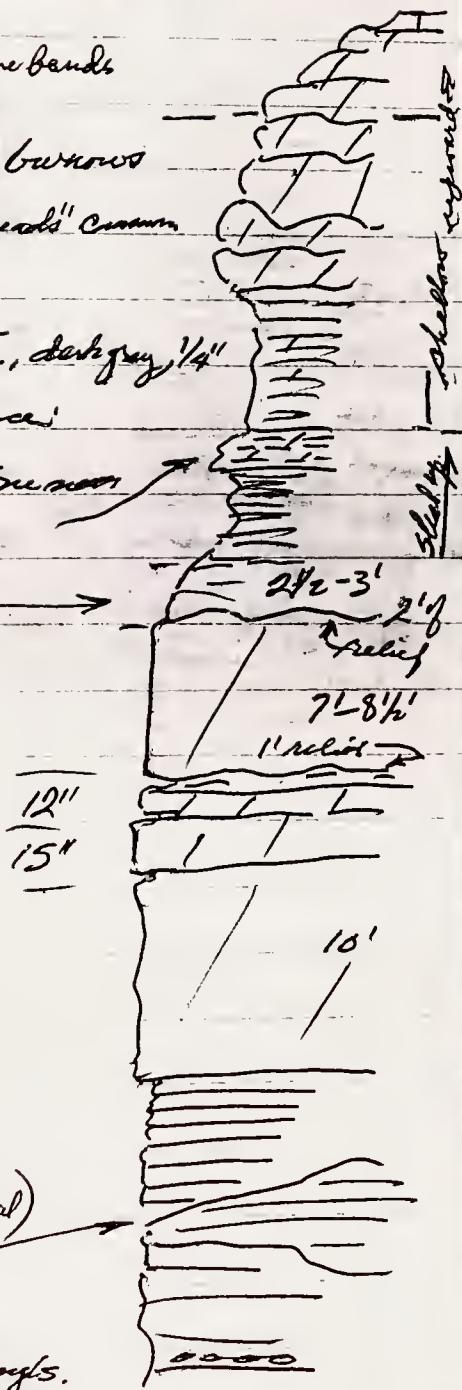
Dolost, X bedded, massive (beach?)

Dolost. sandy, & sandy silty dol.
2-4" beds (bars or ^{mixed} glacial)
2 1/2 - 3 1/2 m.

2½-3' set + fill surfaces

(several)

alt pebble congs.
20° below top of
this unit





5/24/95

(Cont.) from previous page

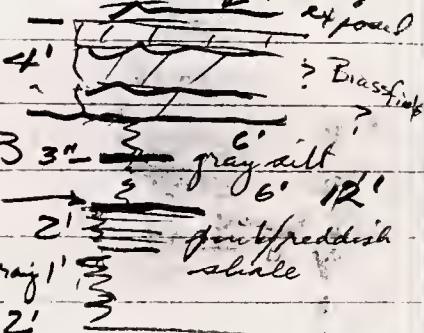
Dolost., veryuggy, wavy, brown
burred, some fossil frags. 15'
silt & pebbles common

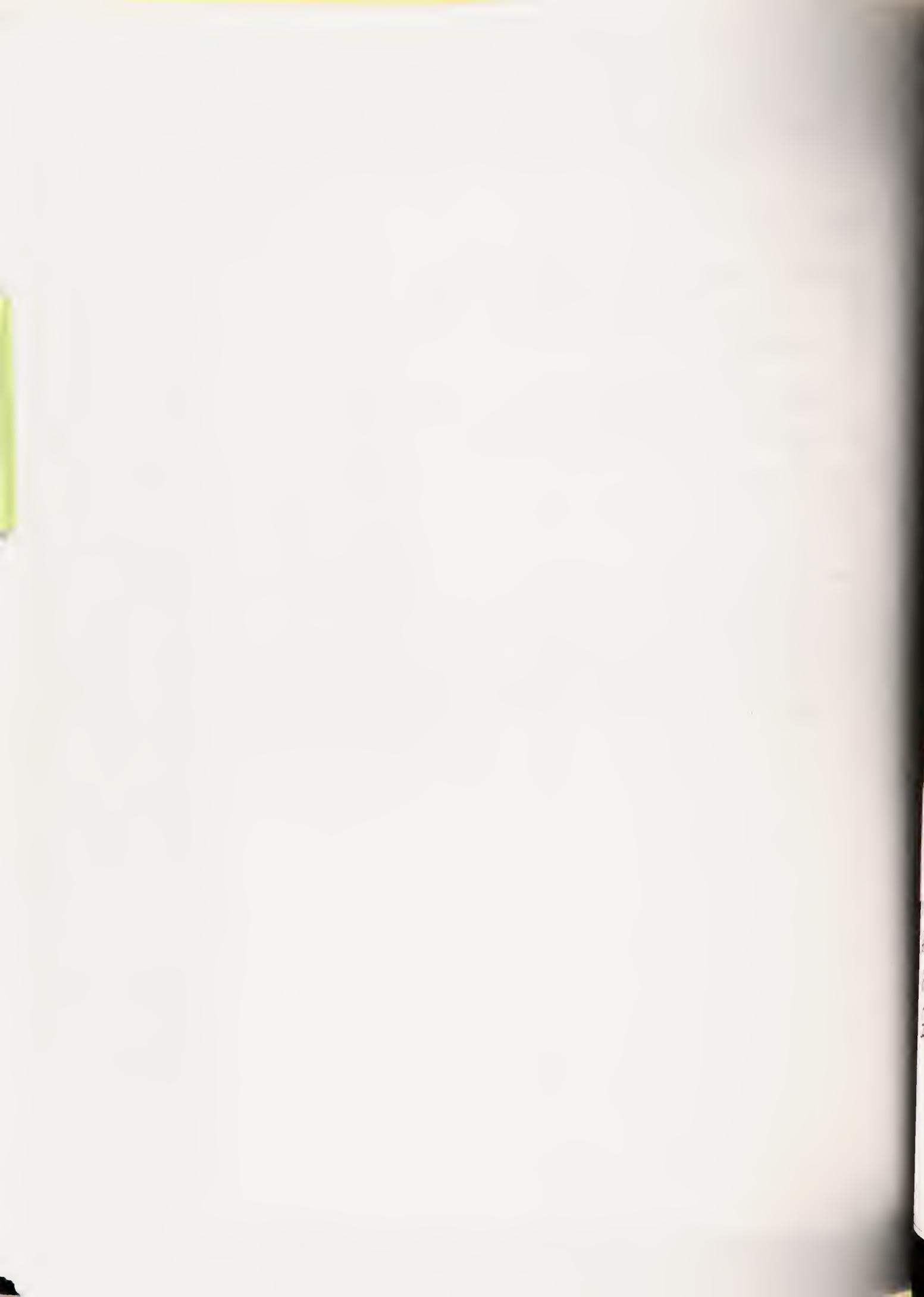
— Gray shaled siltstone, poorly
exposed erosional, sharp contact

Check this!

med. Gray shale with a few
1" limestone bands exposed in

gully on S. side of highway 3 3" — gray silt
pencil 1993 6/16/93 2" siltstone — 3" 6' 12'
gray 1" — 3" —





5/24/95 ⁴⁰ Ohio St. at 41 immediately
S. of crossing of Ohio Brush
C.R. 1.4 miles S. of Jacksonville, Ohio
slabby weathering Braufeld

irregular weathering with
shaly interbeds

50[±]1

Massive bed of Lower Braufeld
with clear and molds
light colored shale

sharp contact

10-12¹

Belfast Bed - sandy siltstone, olive gray,
burrowed (like Tabebesss).

9¹[±]

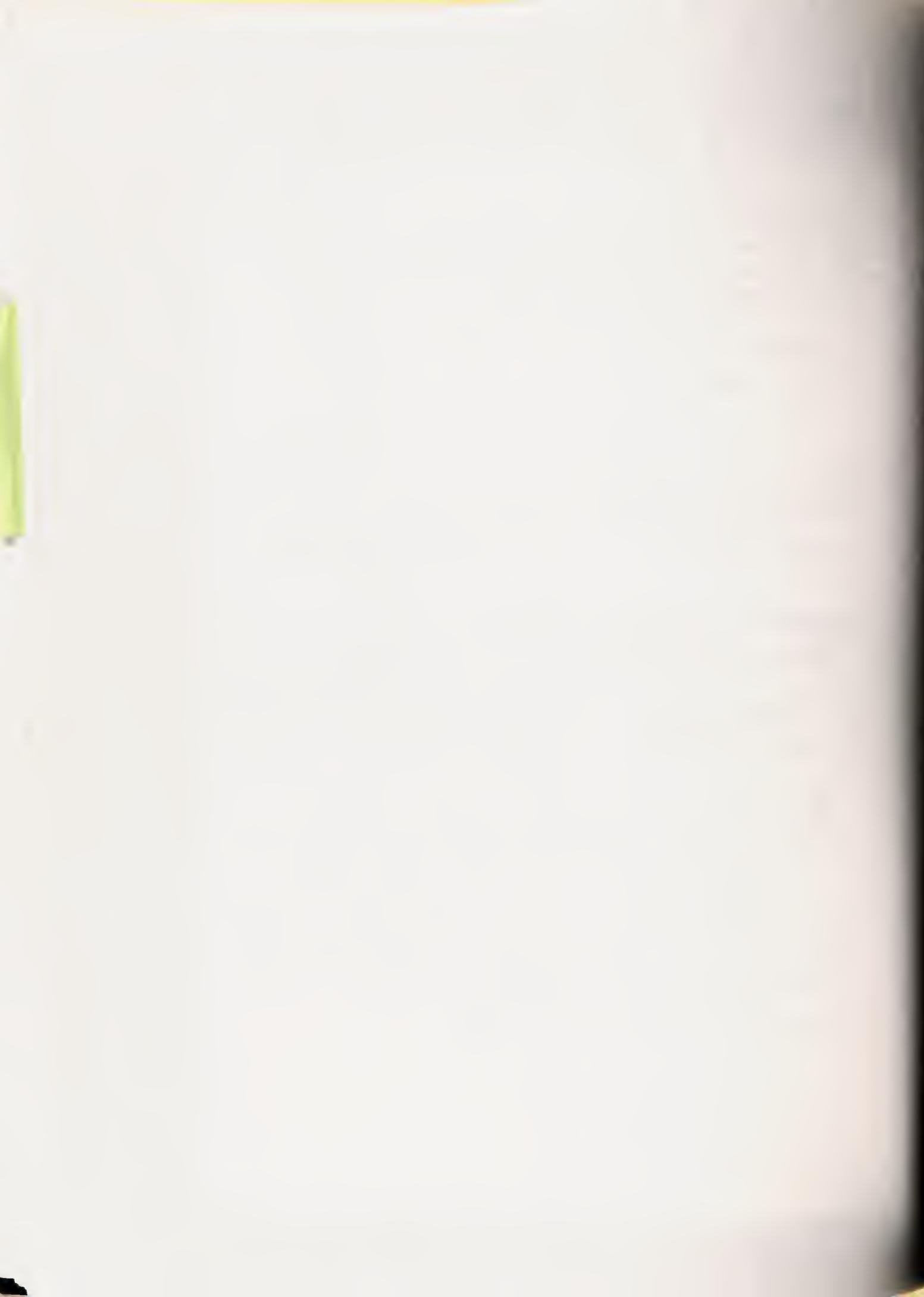
Red siltstones
Calcareous with

road

covered 12¹

17¹

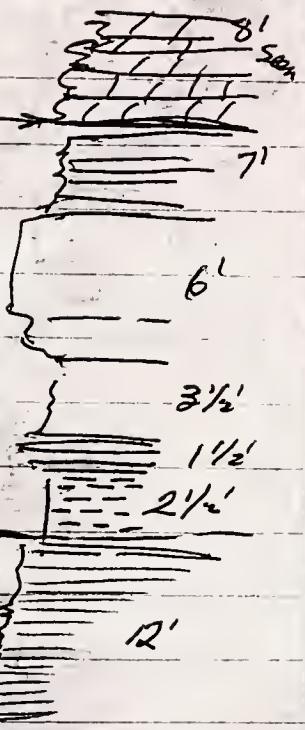
Photo B&W. West face of road cut
Coll. 5/24/95/A. float a "base" of Belfast
on ledge above road. 20¹3" thick
at Ohio Brush Creek, Stop 5A
Bexroad & Keffner, 1984, Field
Guide GSA Ann. Mtg.



(44)

5/24/95

1/4 mile farther south on Highway 41
sharp contact with lower Brantfield
Slebby siltstone



Massive siltstone

Bands of clay-rich and silt-rich clastics

Laminated siltstone

Massive, unbedded siltstone sharp contact

Red beds shale with limonitic

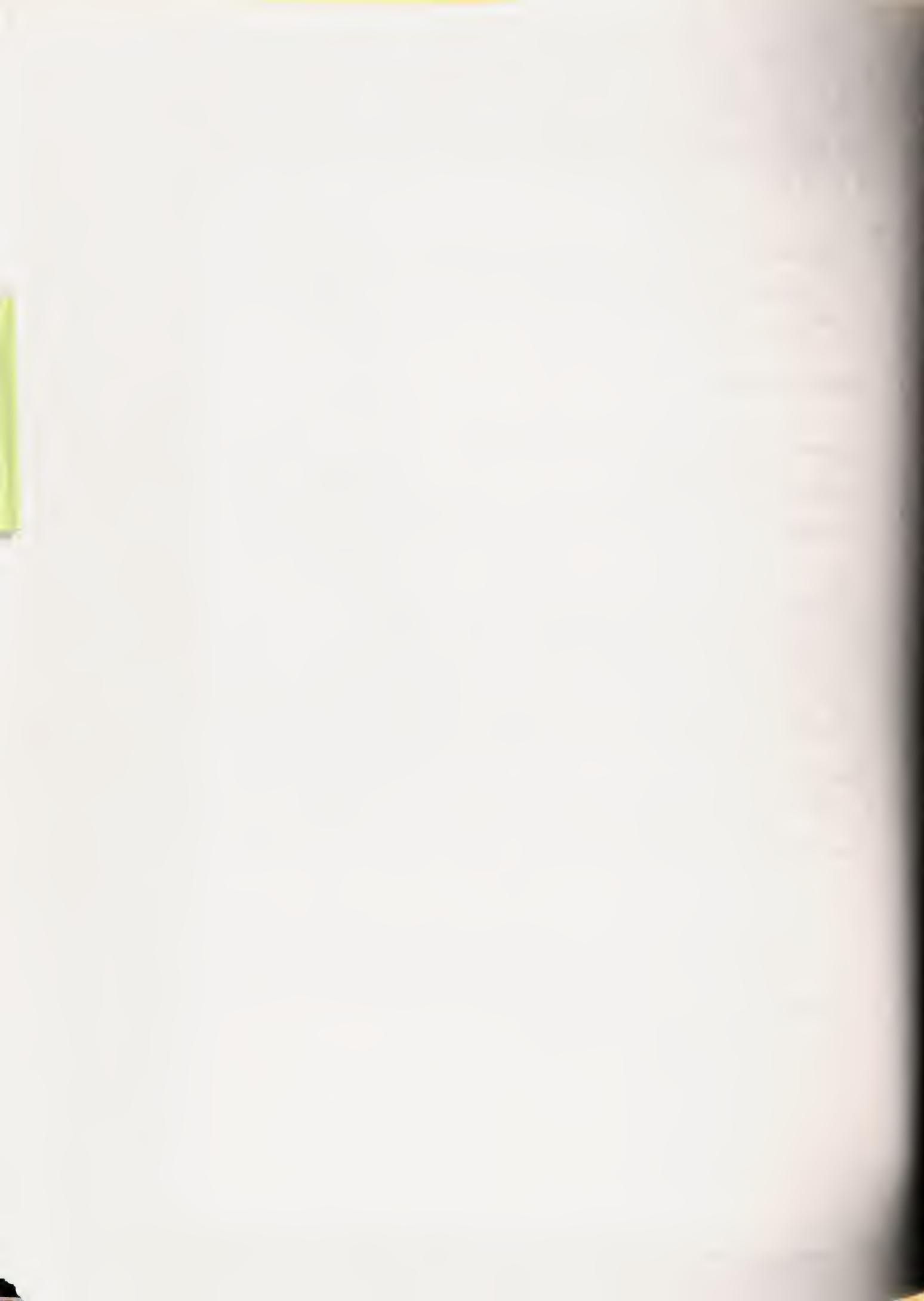
Bands of calc. siltstone

2 B/W & 1 color photos of W. side of road

road cut is

Immediately N of Murphy Ridge Rd
which enters from W side of Hwy 41

Took Ohio St Road 41 south to
West Union. Road cut exposures on
West side of road



5/24/95 (H2) Holland undated
 (Holland loc.) 3 1/2 miles & we think his
 loc. was farther N toward corner
 3 1/2 miles N of intersection of
 Ohio St. and 240 & 41. N of West Union
 Brookfield stage contact on Ohio St. 41.

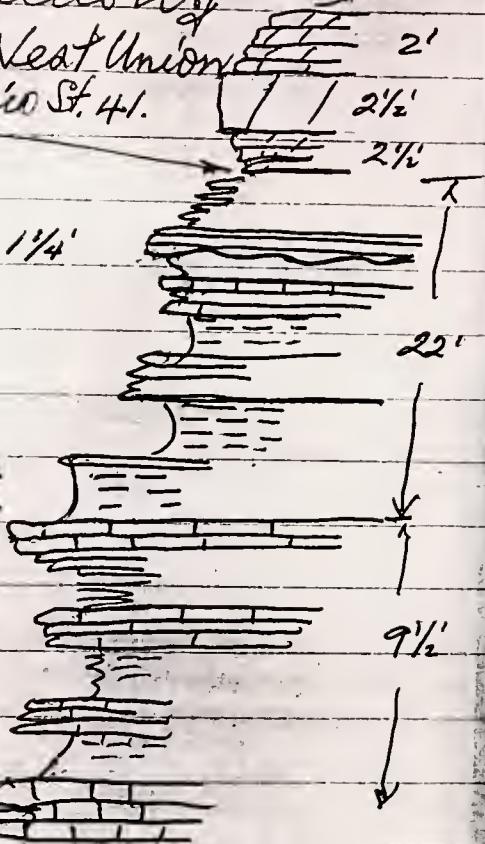
dolomitic
 burrowed calc. siltstone,

small solitary corals
 crinoids, brgy.

5/24/95 B Et gray dol
 Calcareous/granstone
 sandy road level
 cross bedded in
 some bds.

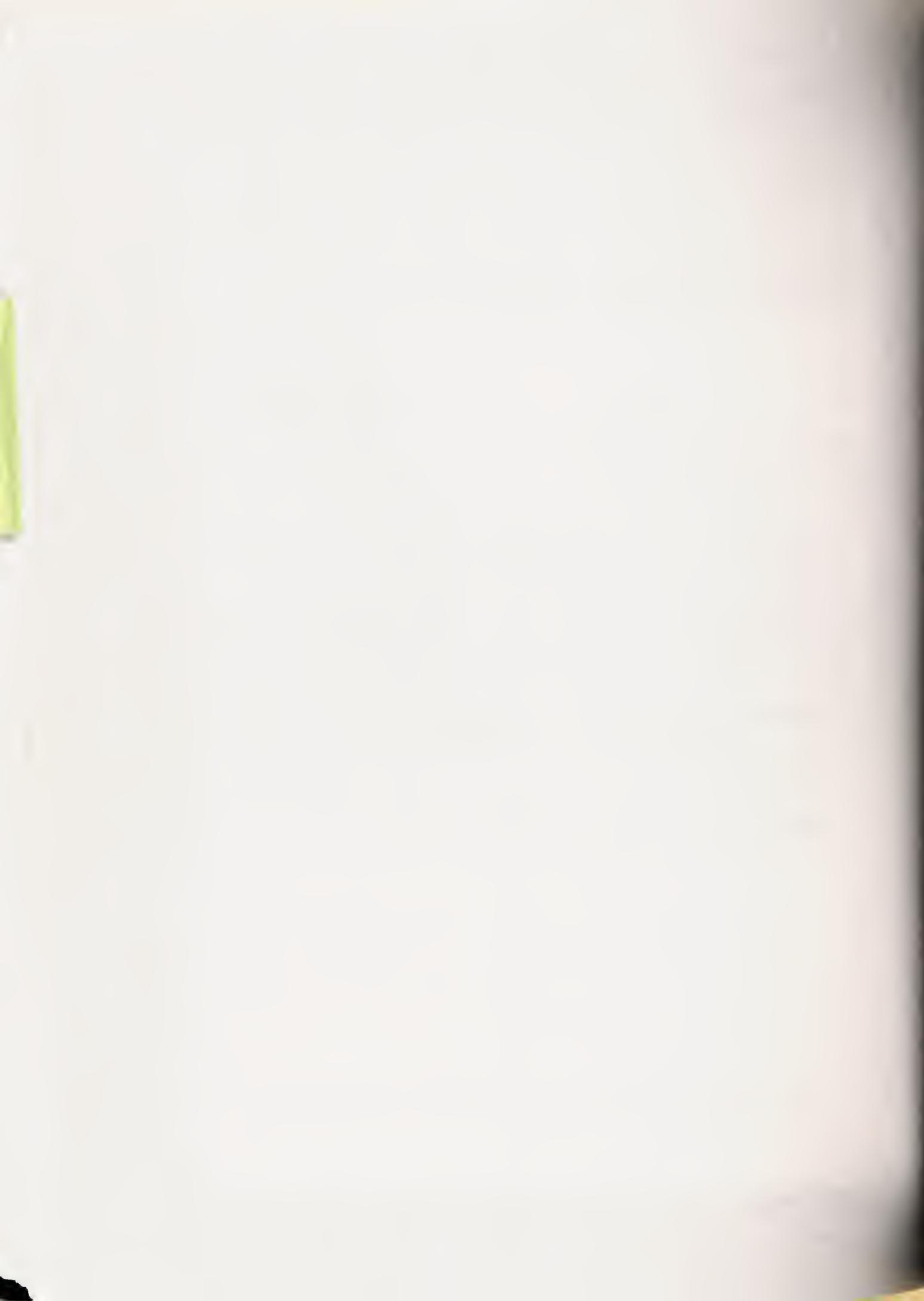
calcareous granstone
 burrowed.

small crinoid bed



Need to work out Holland's street sect graphs.

A very hot day - 85°F - w. sun!!



5/25/95. Thursday.

V. heavy rain on Wed., night & Thursday morning. Car trunk leaked & part was wet. Needol sponge.

Afternoon - took Ohio Standard 125 to Georgetown. See following (1993 -

Map approach to Georgetown from west
W. side White Oak Cr. 43

Ls. 8" ledge at top of exposure

Ledges of Ls. and dolomite / dol.

Coll. 5/25/95 A ~~float~~ (see 5/23/95) -
temporal. under broad sp. "potatochip"

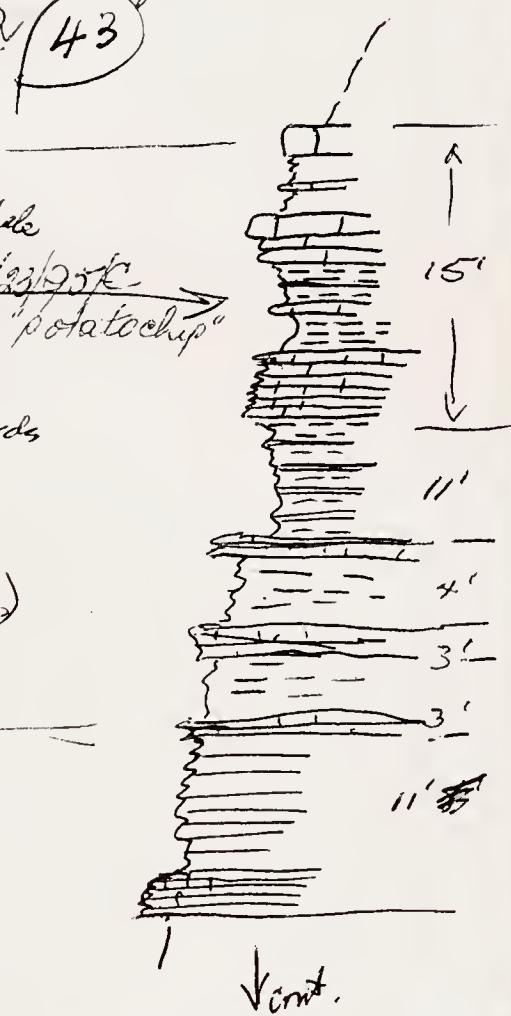
Shale/silt with a few thin ls. beds

Photo B + W

(float has "bivalve" & "Rafinesquian"
"peckard" bivalve.

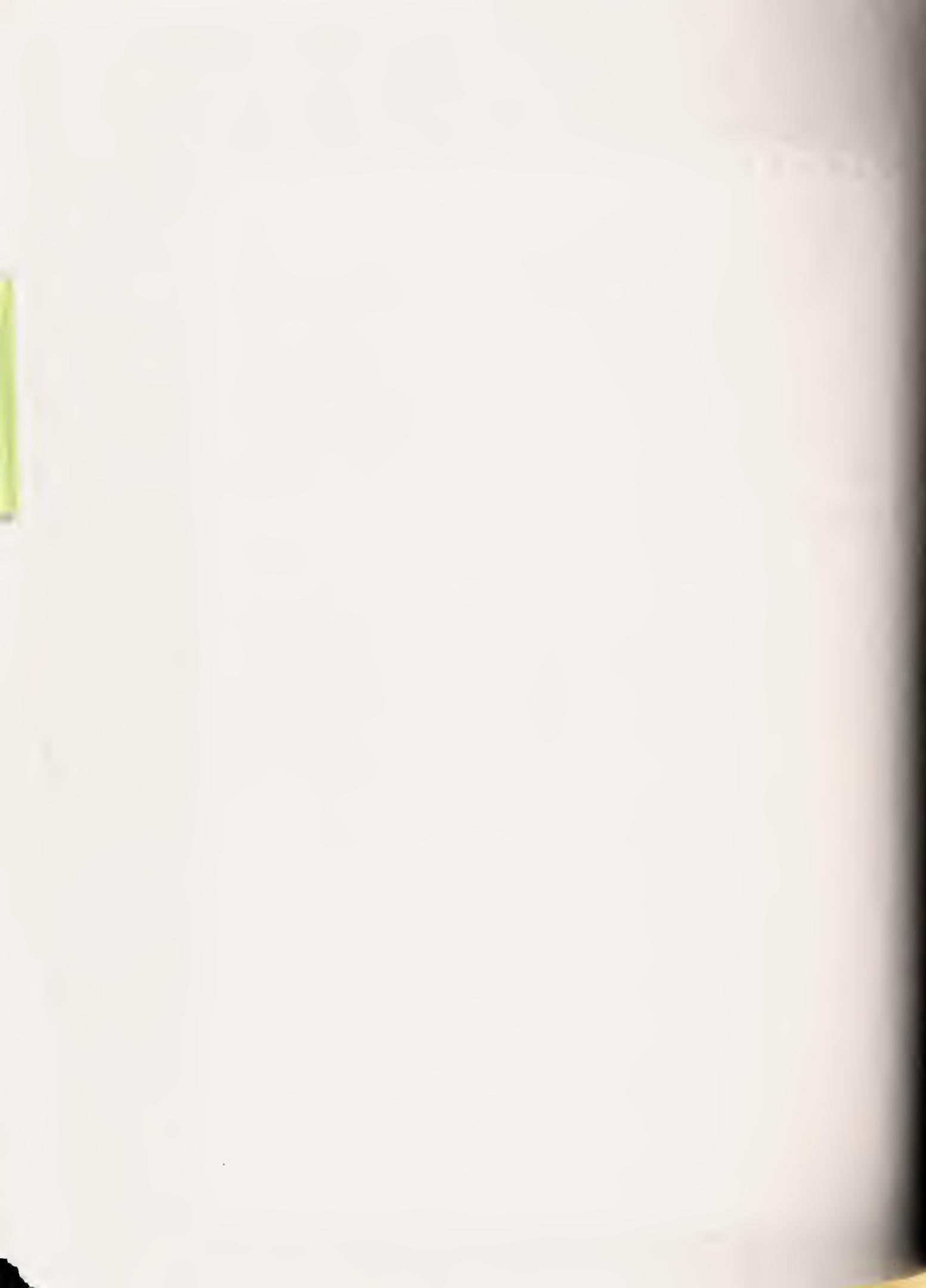
v. Thimbedded shale & limestone

Total 4 B + W photos to cover
whole of c.



5/25/95

East side of Whiteoak Creek valley
on Ohio St. Rd. 125. - in road cut, the
6 or 7 ~~late~~ shale couplets below
the rock section exposed on west side of
Whiteoak Creek - see bottom of
this western exposure on the next
page



5/20/95. West side of Whiteoak Cr.

Shale/siltstone with almost no thin ls. ? Miami Shale? or

(cont'd)

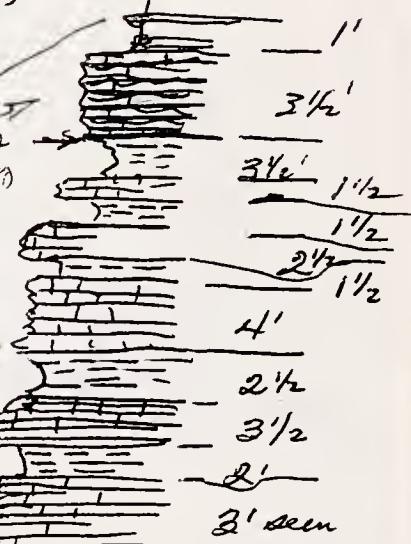
cont. ↓

another shale? some "nodular" ls
but very thin

Ls. calcareous & silty.

Ls., thin bedded 1" to 2" beds, with

shaly/silty interbeds separated
by 2' ± more silty interval
a vague cyclicity



Ls. as above

about
12' to 15'

base of East road cut

Total of 6 or 7 cycles below lower ls. shale.
(see previous page)

44
5/25/95. Point Pleasant. Holland's loc.

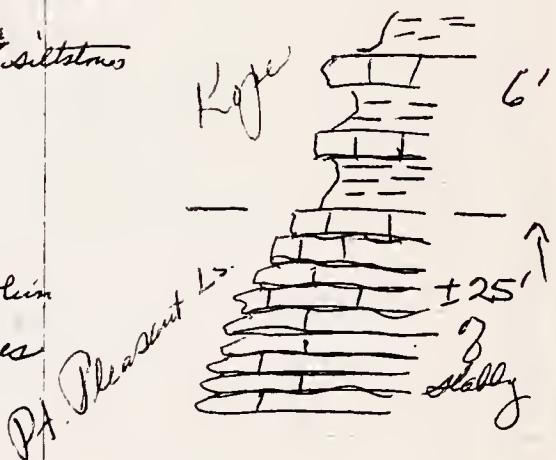
Turn off R.R. 503; stream exposure on N side

Stop at about .6 mile West of Pt. Pleasant city limits. Creek exposure -

Ls. ledges ^(8") with 1' to 1 1/2' siltstones

Limestone - slabby -

8" to 18" beds with thin siltstones - forms ledges in stream



Up private road to Quarry Creek lane
exposed ^{exposed} of ~~late~~ siltstone in NW side
of access road about 20' above outcrop sketched above;
two-thirds of the way up the hill

Ls in 2"-3" ledges in a
deeply weathered shale + brown
siltstones



Coll. 5/25/95/B - float but prob from a
ledge right there.

